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RESEARCH PAPER

A Study on Consumer Perception for Frozen Value-added Poultry Meat Products in Dhaka City

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ABSTRACT

Due to the strong demand for frozen and ready-to-cook foods among urban residents, the business for these foods in Bangladesh has recently experienced rapid growth. The rise in women's employment and the general increase in purchasing power can both be related to the rise in demand for these processed goods. The purpose of this study is to discover the variables that affect how residents of Dhaka city perceive frozen and ready-to-cook poultry items. A survey was conducted on 75 consumers from five areas (Uttara, Mirpur, Mohammadpur, Mogbazar and Zatrabari) of Dhaka city (15 consumers from each area) using a structured questionnaire. This research revealed that middle-aged women with college degrees may be more inclined than younger or older persons to take part in the decision to purchase food for the household. The majority of respondents lived in four-person households with two children. About 52% of consumers had a medium income, while 49% worked in the private sector. Muslims represented the majority of the respondents, and none of them experienced any health problems. Fried chicken was the consumers' favorite chicken dish, and spring rolls came in second. The majority of survey participants often purchased chicken from nearby stores, primarily for their children. Taste was the main motivation for purchasing chicken products. Income was the key deciding element in the purchase, while price was the main factor in the selection of chicken products. The brand that was most well-liked was CP. According to this study, the elements influencing choosing poultry products should be emphasized by policymakers in order to increase the demand for processed frozen and ready-to-cook poultry products among Bangladeshi city dwellers.

Key words: Dhaka City, Consumer Perception, Frozen Value-added Poultry Meat

Introduction

It has been demonstrated that in many developing nations, rapid urbanization and the rise of the middle class are positively related to higher dietary acclimation to western cuisine. A constant increase in the use of processed foods and animal products is also being driven by consumers' hectic work schedules and changing lifestyles. They anticipate foods that can be prepared quickly or are already made. Introduction of frozen value-added chicken items add a new dimension in food consumption of Bangladeshi consumers. Increased revenues from poultry are largely a result of value addition. Nutrient modification, processing, or transgenesis are all possible methods for adding value. Processing, which may turn low-value meats and byproducts into a highly nutritious end product, is a frequently used approach for value addition.

Food processing has increased foods' palatability and shelf life, but it can also have unfavorable consequences, such as the loss of nutrients due to heat treatment and the development of hazardous substances, such as N-nitroso compounds (Van Boekel *et al.*, 2010). According to studies (Lawrence and Baker, 2019; Martínez *et al.*, 2017; Moubarac *et al.*, 2017; Nardocci *et al.*, 2021; Rauber *et al.*, 2020), greater consumption of processed foods is also linked to a rise in obesity and chronic non-communicable diseases. Besides this, the market for frozen, high-value, ready-to-cook poultry items is growing rapidly among Bangladeshi city dwellers. The country's frozen food business, which was worth Tk 50 crore ten years ago, has now surpassed Tk 800 crore and will reach Tk 3,000 crores by 2024. (Supriya, 2022). This industry in Bangladesh has great potential as the nation's per capita income, nuclear family structure, tastes, and fashion trends change (Ares *et al*., 2017). Fried chicken, chicken lollipop, cutlets, chicken burger patties, chicken strips, chicken shami kabab, spring rolls, chicken wings, chicken popcorn, and other frozen ready-to-cook meat items are just a few examples. In order to take advantage of consumers' evolving buying patterns and their ability to purchase high-quality food and grocery items, modern organized retail formats are rapidly spreading across the country. Aftab Bahumukhi Farms Ltd, AG Agro, BRAC, CP Bangladesh, Paragon Group, Eon Group, ATR, etc. are the leading participants in Bangladesh's chicken processing industry. Whereas, Aftab Bahumukhi Farms Ltd, BRAC, CP Bangladesh, AG Agro, Golden Harvest, Kazi Farms Ltd, Nourish Poultry, Paragon Group, Eon Group, Saint Martin Group, Essential, PRAN Group, ATR, etc. are the main frozen value-added poultry processing companies.

With the growing intake of processed food, there is a need to comprehend consumption patterns and related factors that affect the consumption of processed food. Studies on food consumption have noted disparities in sociodemographic characteristics (Deshmukh-Taskar *et al*., 2007; Eicher-Miller *et al*., 2015; Hiza *et al*., 2013). Food intake patterns were shown to be influenced by a number of variables, including ethnicity (Barkoukis, 2007), gender (Deshmukh-Taskar *et al*., 2007), age (Westenhoefer, 2005), socioeconomic level (Deshmukh-Taskar *et al*., 2007, Hare-Bruun *et al*., 2011), and health status (Trondsen, 2007). A previous study by Muzayyanah et al. (2021) discovered that over one-third of sample respondents (34.2%) made a weekly purchase of processed food items. The majority of respondents said they choose processed meat over other foods because of quality (43.6%), taste/preference (59.3%), price (27.6%), brand, and accessibility. It would be easier to understand the diversity of eating behaviors with these characteristics by looking at consumption patterns, which would also be useful for developing an evidence-based strategy for nutritional intervention or risk assessments of food safety (Barkoukis, 2007). As a result, this study was carried out to determine consumer perceptions of frozen value-added poultry products in Dhaka, Bangladesh, based on sociodemographic characteristics and characteristics related to the consumption and purchase of processed foods.

Materials and methods

Site of the experiment and experimental design

The survey was conducted in 5 areas of Dhaka city namely Uttara, Mirpur, Mohammadpur, Mogbazar and Zatrabari. A total of 75 middle class households whose monthly income is in between BDT 20000-100000 (15 household/area) were randomly selected for obtaining the responses. The respondents answered a pre-structured questionnaire in face-to-face interviews from April to June 2022.

Data collection

This research is based on primary data. To collect required information about various aspects proposed to this study, a planned questionnaire was constructed which was then pre-tested with a small population through a pilot survey. Suggestions from this pilot survey were included in the questionnaire and the final draft of the questionnaire was prepared through suitable modifications. The structured interview schedule was meticulously planned with the study's goals in mind. The responders could easily grasp the questions and statements in the schedule since they were basic, direct, and straightforward. Informal verbal consent was obtained from the participants prior to the interview. The questionnaire consisted of two parts. The first part is the socio-economic and demographic situation of the respondents and the second part is the processed food consumption and purchase attributes.

Statistical analysis

Both primary and secondary data were evaluated, validated, and thoroughly amended after collection in order to obtain the relevant and associated information. The gathered data was categorized, tabulated, and assessed in accordance with the study's objectives to extract the significant findings. The data was largely evaluated and provided in tabular form because it was simple to calculate, often used, and understood. The tabular analysis using MS Excel 2010 was mostly based on statistical measurements like averages, percentages, and so forth.

Results and Discussion

Socio-demographic characteristics of the respondents

Age, gender, literacy level, no. of family members and children, income/month, income source, ethnic group and health condition of the respondents were considered as criteria to describe the socio-demographic characteristics of the primary respondents. Every criterion was again divided into different categories.

Individual and family food preferences influence food purchases, but a variety of other variables, such as age, gender, educational attainment, and household income, all have an impact on grocery shopping practices (Darko *et al*., 2013; Wiig and Smith, 2009). Table 1 shows the results of socio-demographic characteristics of the respondents of the household who normally purchase the family food. In our research it was found that, maximum number of the respondents were within the 35-45 year age limit (36%) followed by 25-35 years (33%), >45 years and 18-25 years (13%). Ali *et al*. (2015) reported the highest percentage of respondents within the 31-40 year age group which is in line with our findings. Contrary to our results Muzayyanah *et al*. (2021) reported that the highest proportion (68%) of the consumers were 18-25 year age range. Islam *et al*. (2019) also reported the highest percentage (88%) of consumer within the age range of 18-24 years. The age demographics of the sampled respondents of our experiment suggest that the group being questioned is mature enough to reply to questions about different aspects of food intake. Out of the 75 respondents surveyed, 57% were female which was in line with the findings of Muzayyanah *et al*. (2021) and Islam *et al*. (2019). However, Choudhury *et al*. (2021) found an almost equal proportion of male and female respondents in their survey. In contrast Ali *et al*. (2010) reported the highest proportion (70%) of respondents were male.

Table 1. Socio-demographic characteristics of the sampled respondents

Parameter	Category	Respondents (n=75)	Percentage (%)
Age	18-25	10	13
	25-35	27	33
	35-45	25	36
	>45	13	17
Gender	Male	32	43
	Female	43	57
Education level of farm owner	Primary	0	0
	Secondary	2	3
	Higher secondary	27	36
	Graduate	46	61
Family size (Member no.)	6	10	13
	5	19	25
	4	32	43
	3	14	19
	2	0	0
No. of Children	3	5	7
	2	38	51
	1	23	31
	0	9	12.0
Income/month (BDT)	Low (20000-50000)	32	43
	Medium (50000-100000)	39	52
	High (>100000)	4	5
Occupation	Gov. Job	12	16
	Private job	37	49
	Business	4	5
	Housewives	22	29
Ethnic group	Muslim	56	75
	Hindu	12	16
	Christian	7	9
Health condition	No health condition	70	93
	At least one health condition	5	7

The educational profile of the respondents shows that most of them (61%) have graduate level or higher qualifications while about 39% of the respondents are from the higher secondary level and below. In agreement to our result Ali et al. (2015), Muzayyanah *et al*. (2021) and Islam *et al*. (2019) also reported that the highest percentage of the respondents had graduate level or higher qualifications. About 43% of the respondents had 4 family members followed by 25% who had 5, 19% who had 3, and 13% who had 6. A majority of the respondents (51%) had two children, compared to 31% who had one and 7% who had three. About 12% of the respondents had no children. According to our experiment, Ali *et al*. (2010) likewise found that the majority of respondents had two children or fewer. A medium income of 50000–10000 BDT per month was reported by 52% of the respondents, while a poor income of 20000–50000 BDT per month was reported by 43% of the respondents. Only 5% of the respondents made more than 100,000 BDT per month. Muzayyanah *et al*. (2021) also found the highest proportion of the consumer within the middle income group. Private job was the most common occupation among respondents (49%), followed by housewife (29%), government job (16%), and business (5%). Contrary to our results, Islam *et al*. (2019) reported in their study a major portion of the respondents were housewives (84.8%).

According to the findings, the majority of respondents, roughly 69% were Muslims, followed by Hindus (19%) and Christians (12%). Almost 150 million people or 91.04% of the population in Bangladesh are Muslims (Census, 2022). The outcome of our experiment might confirm this. The majority of respondents (93%) reported having no health issues, while about 7% reported having at least one.

Buying behavior of surveyed respondents

Consumer buying behavior refers to how individuals act when making purchases, including what they purchase, where and when they shop, and how much they spend. When choosing things to consume, particularly food products, consumers have numerous options. In this study, customer buying behavior was evaluated based on product preferences, shopping locations, frequency of purchases, reasons for making processed food purchases and brand preferences. Consumer preferences for poultry products are shown in Figure 1. The majority of customers (51%) prefer chicken fries, followed by 19% who prefer spring rolls, 12% who prefer nuggets, 7% who prefer meatballs, 7% who prefer grilled chicken, and 5% who prefer cutlets.

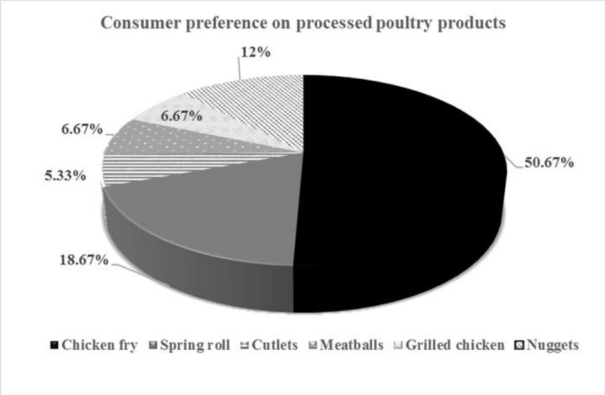

Figure 1: Consumer preference on processed poultry products

Economic and psychological variables play a significant impact in consumer behavior when it comes to decisions about processed products (Font-i-Furnols and Guerrero, 2014). Accessibility, convenience, and improved customer service all contribute to enhancing brand perception among customers (Lindberg et al., 2018). Table 2 summarizes the buying place, frequency of purchasing processed food, primary driver of purchasing outside food, Reasons for purchasing processed food and preferred brand. The majority of respondents (76%) purchase processed chicken products from nearby retailers, while 24% of consumers do so from town grocery stores, which is consistent with the findings of Puttarathnamma *et al.* (2015). Approximately 43% of consumers consume processed food on a monthly basis, followed by 36% on a weekly basis, 13.33% on a daily basis, and 8% on a fortnightly basis. In agreement with our findings, Islam *et al*. (2019) revealed that a significant fraction of customers (36%) purchase frozen food items on a monthly basis.

Children (43%) were the main motivators of purchasing outside food, followed by father (37%), others (13%), and mothers (7%). In contrast to our findings,

Table 2. Buying behavior of surveyed respondents for processed food

Parameter	Category	Respondents (n=75)	Percentage (%)
Buying place	Nearby retailers	57	76
	Town grocery store	18	24
Frequency of eating processed food	Daily	10	13
	Weekly	27	36
	Monthly	32	43
	Fortnightly	6	8
Main motivator of purchasing outside food	Children	32	43
	Father	28	37
	Mother	5	7
	Others	10	13
Reasons for purchasing processed food	Taste	43	57
	Save time	22	29
	Convenience	10	13

Puttarathnamma *et al.* (2015) claimed that mothers are the primary motivators of processed food purchases. he majority of respondents (57%) said they bought processed food for taste, while 29% said they did it to save time and 13% said they did it for convenience.

Factors influencing a purchasing decision

The decision to purchase processed foods is influenced by socioeconomic considerations (Li and Li, 2012). Income (60%) and gender (39%) are the two main variables in this study that affect purchase decisions (Table 3). Price was the main consideration in choosing chicken products (53%), followed by halal status and hygienic conditions (16%), brand reputation (11%), and product quality (4%).

Table 3. Factors influencing a purchasing decision of processed poultry products

Parameter	Category	Respondents (n=90)	Percentage (%)
Factors influencing a purchasing decision	Gender	29	39
	Income	45	60
	Education level	1	1
Factors influencing choosing chicken products	Price	40	53
	Halalness	12	16
	Hygienic condition	12	16
	Brand reputation	8	11
	Product quality	3	4
Frequently buying brand	Aftab	9	12
	Kazi	23	31
	Golden Harvest	4	5
	CP	24	32
	BRAC	3	4
	Bengal	7	9
	Paragon	5	7

Price was mentioned as one of the main elements influencing purchasing decisions by Puttarathnamma *et al.* (2015) as well. One of the most crucial variables that may have a bigger influence on a person's food preferences is the price of the food. It is therefore anticipated to have a significant impact on diet quality and energy intake. According to a study by Bowman (2006), about 47% of women believed that the cost of food was an important consideration that should be given priority when making decisions about what to buy and how to prepare meals. Most of the consumer prefer the chicken products of CP (32%) and Kazi (31%) followed by Aftab (12%), Bengal (9%), Paragon (7%), Golden harvest (5%) and BRAC (4%).

Conclusion

Food consumption habits in Bangladesh are gradually changing away from fresh, unprocessed, unbranded foods and toward processed, packaged, and branded foods as well as away from cereal-based diets and toward high-value foods. But nonetheless, ready-to-eat processed foods have been related to non-communicable diseases. To assess their nutritional content and effects on public health, it is important to identify these commodities and determine the population's consumption patterns. In this study, we have investigated the consumption pattern of processed poultry products. This research revealed that, in Dhaka city middle-aged women with college degrees may be more responsible when making the decision to purchase food for the family. The majority of respondents lived in four-person households with two children. Muslims made up the bulk of the responders, and none of them experienced any health problems. Fried chicken was the consumers' favorite chicken dish, and spring rolls came in second. The majority of survey participants often purchased chicken from nearby stores, primarily for their children. Taste was the main motivation for purchasing chicken products. Income and price were the two main deciding factors for purchases. The brand that was most well-liked was CP. To draw a more definitive conclusion, it is necessary to do additional study with a bigger sample size.

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